

REMARKS

This amendment is responsive to the prematurely Final Office Action issued December 7, 2010. Reconsideration and allowance of claims 1-10, 15, and 22-30 are requested.

The Office Action

Claims 1 and 10 stand rejected under 35 U.S.C. § 102 over Ma (US 2005/0063575).

Claims 2-7 stand rejected under 35 U.S.C. § 103 over Ma as modified by Sumanaweera (US 2005/0049495).

Claims 8-10 and 22 stand rejected under 35 U.S.C. § 103 over Ma as modified by Sumanaweera, as further modified by Gelvin (US 7,797,367).

The Examiner failed to examine claims 15-21 based on an inappropriate holding of constructive election.

**The Examiner Erroneously
Failed to Consider Claims 15-21**

In the Office Action of May 21, 2010, the Examiner made a Restriction Requirement between Group I drawn to an imaging communication **system** and Group II drawn to a **method** of imaging communications, asserting that the method could be carried out by other systems and/or that the system could be used to perform other methods. Claims 15-21 are all dependent system claims which further limit the elected parent system claims. That is, claims 15-21 further refine the system set forth in parent claim 1 in order to add limitations which distinguish more forcefully over the previously applied prior art. Because these dependent claims further limit their parent claims and are properly classified in the Group I elected system claims, it is submitted that the Examiner's holding that claims 15-21 as being non-elected is erroneous and should be withdrawn.

The applicant further traverses the Examiner's assertion that claims 15-21 are distinct from and independent from what the Examiner searched regarding claims 1-10 and 22. Claim 15, for example, adds two elements to the system of claim 1, particularly a diagnostic scanner and a reconstruction processor. Previously examined claim 8, in line 14, calls for a diagnostic scanner. Claim 22, in

line 3, also calls for a diagnostic scanner. Thus, the diagnostic scanner limitation has been previously considered by the Examiner and is not distinct or independent from the limitations of claims 1-10 and 22.

Claim 1, at line 3 and numerous lines throughout, claim 8, at lines 3-4, and claim 22, at line 3 and numerous other lines throughout, claims 1-10 and 22 all set forth diagnostic images. Thus, claims 1-10 and 22 include a diagnostic scanner and the diagnostic images generated or reconstructed therefrom. It is submitted that the hardware which converts the output of the diagnostic scanner of the examined claims into the diagnostic images of the examined claims is commonly called a “reconstruction processor” and that specifying that it is a reconstruction processor which generates the diagnostic images set forth in the examined claims is not and has not been shown to be a distinct and independent invention from the examined claims.

Similarly, claims 16-21 further refine the system of their parent claims by adding analogous limitations or further narrowed analogous limitations to the concepts set forth in the examined claims. Claim 16 sets forth transmitters and receivers in the remote units which further refine the transmitters and receivers of the remote units already present in the previously examined claims. For example, claim 17 calls for a video camera which further refines the electronic camera previously set forth in examined claim 8, and the optical camera previously set forth in examined claim 22. Claim 18 further refines the remote units set forth in the examined claims. Claim 19 calls for a patient records database which the Examiner’s primary reference, Ma, acknowledges as prior art in paragraph [0003], illustrating that the mere addition of a patent records database is not distinct and independent. Claim 20 further refines the remote unit which was previously claimed in examined claims 1-10 and 22. Claim 21 further refines the remote unit which was previously set forth in examined claims 1-10 and 22. Accordingly, it is submitted that the Examiner has not shown that all, or indeed any, of claims 15-21 are distinct or independent from examined claims 1-10 and 22.

It is irrelevant that claims 15-21 had once been in the non-elected method Group by having been method claims. It is submitted that if the same claims had been submitted as new claims, that no issue of constructive election would have been asserted.

Accordingly, it is submitted that the Examiner's holding of construction election should be withdrawn. A timely examination and consideration of claims 15-21 on the merits is requested.

The Finality of the Office Action
Is Premature and Should Be Withdrawn

Claim 8 was placed in independent form including the subject matter of its parent claims 2 and 1. Because a dependent claim is read as including all of the subject matter of its parent claims, placing a dependent claim in independent form including the subject matter of its parent claims does not change the scope of the claim. Even though the scope of claim 8 was not altered when it was put in independent form, the Examiner withdrew the prior ground of rejection and issued a new ground of rejection.

Moreover, the Examiner has failed to identify any differences between original claim 8 when read with its original parent claims 1 and 2, which required her to cite new references and necessitated withdrawing the prior ground of rejection and issuing a new ground of rejection. Accordingly, it is submitted that the new grounds of rejection applied against claim 8 was not necessitated by Amendment B.

Accordingly, it is submitted that the Finality of the Office Action of December 7, 2010 is premature and must be withdrawn.

The Present Application

The scanner from which medical diagnostic images are generated is typically run by an operator or technician. Other medical personnel prepare the patient for the scan and help with the post-scan patient handling process. All in all, there is often a significant time period between the generation of the diagnostic images of one patient and the generation of the diagnostic images of another patient. The radiologist typically makes his diagnosis based on the diagnostic images, although the appearance of the patient can be helpful. It is a very inefficient use of valuable medical resources to have a radiologist stand around during the imaging procedure waiting for the diagnostic images. Moreover, the next patient to be scanned may be the patient of a different radiologist.

Rather, the radiologists are typically in other parts of the hospital performing other duties and are not hanging around the workstation which controls the scanner to generate the diagnostic images.

Most radiologists have preferences in the various aspects of the diagnostic images, such as preferred lightness or darkness, contrast, coloration, and the like. In order to be sure that a set of diagnostic images are to a radiologist's liking, it is advantageous for the radiologist to review the diagnostic images before the patient is released from the scanner. If the radiologist finds the diagnostic images to be unsatisfactory, the radiologist might make a diagnosis based on unsatisfactory images which could have serious adverse medical consequences, or could have the patient rescanned. If the patient has not left the hospital, the patient may be able to be rescanned yet the same day. However, this delays or disrupts the already scheduled flow of other patients waiting to have diagnostic images generated. If the patient has left the hospital, then the patient must be rescheduled for another day, which is inconvenient for the patient. Plus, scanning a patient twice is an inefficient use of valuable medical resources.

One way to be sure that the images are to the radiologist's liking is to page the radiologist and have him/her come to the imaging suite to view the images. However, depending on the size of the hospital and where the radiologist is located, this could take 10-15 minutes or more, during which time the diagnostic scanner is effectively sitting idle and unused, i.e., a waste of valuable medical resources.

This delay is particularly critical if the patient has been injected with a contrast agent or a radioactive tracer. Such contrast agents and radioactive tracers typically have a predefined concentration range during which the diagnostic images should be generated. If the delay before the radiologist approves the images is too long, then the contrast agent or tracer will have too low a concentration to reimagine the patient. Typically, it is necessary to send the patient home until all of the contrast agent or tracer has been removed from the patient's system so that the procedure can be repeated with a known baseline of the contrast agent or tracer.

The present application proposes to solve these problems with a wireless communication system which enables the scanner operator to send the diagnostic images to the radiologist's portable, remote unit for review. Typically, a

cell phone, PDA, or I-phone lack adequate resolution to determine the quality of the diagnostic images. Accordingly, a table computer is used in some embodiments. The communication system further enables the receiving radiologist to forward the diagnostic images to other radiologists and confer with them. The radiologist, with or without conferring with other radiologists, can then instruct the scanner operator to re-scan the patient using a different or adjusted imaging protocol, release the patient, or the like.

Claims 1 and 10 Are Not Anticipated
By Ma

Claim 1 calls for the workstation to include an input device by which a user selects and addresses one or more medical professionals. Ma is concerned with a system in which several medical imaging systems are networked to a central image management system, such as a picture archival and communication system (PACS). Note paragraph [0002]. In such a system, there is central image management including a central storage unit. Note paragraph [0003]. The diagnostic images are stored in and retrieved from the central storage unit. Note paragraph [0004]. Ma is concerned with an improvement to such a system which is not particularly relevant to the present claims. Ma is concerned with sending and storing images from portable ultrasonic scanners in the central database. Note paragraphs [0030]-[0031]. This problem is further exacerbated by the ultrasonic images having different attributes. Ma proposes to address this problem by the inclusion of image headers associated with the digital images. Note paragraphs [0030]-[0032].

Thus, rather than an input device by which a user selects and addresses selected diagnostic images to a selected medical professional, Ma teaches that all images should be sent to a central database from which others might later receive them. This not only fails to meet the limitations of claim 1, but fails to address the problems with the prior art discussed above. Particularly, it lacks the immediacy of notifying the medical professional. It could be hours or even days before the medical professional is caused to pick up a file for a particular patient and look in the central database or picture archive to see if there are any images there to be reviewed.

Accordingly, it is submitted that claim 1 and claim 10 dependent therefrom are not anticipated by Ma.

Claims which depend from claim 1 have been amended to emphasize the imaging communication aspect of the claimed imaging communication system and to distinguish yet more forcefully over Ma.

**The Claims Distinguish Patentably
Over the References of Record**

Sumanaweera does not cure the shortcomings of Ma discussed above. Rather, Sumanaweera emphasizes that diagnostic images, particularly ultrasound images, should be sent to a central location. Sumanaweera proposes storing knowledge at a central location for facilitating image analysis and interpretation. Sumanaweera does not address or provide for real time communication among medical professionals, between a medical professional and a diagnostic scanner operator, or among or between radiologists and/or an operator of a diagnostic scanner workstation.

Gelvin is concerned with wireless integrated network sensor next generation (WINS NG) nodes. It is submitted that Gelvin shows that the present application is enabling in the sense that one would be able to build the claimed system from the information given in the application and general knowledge. However, it does not put the reader in possession of the idea of an improved communication system which improves real time communications among radiologists and medical professionals to perform a real time review of generated diagnostic images and feedback to a diagnostic imaging scanner operator about the images.

Accordingly, it is submitted that Sumanaweera and Gelvin do not overcome the shortcomings of Ma and that dependent claims 2-7, 10, and 23-28 distinguish patentably and unobviously over the references of record.

Claim 8 calls for a means for selecting and addressing one or more medical professionals. Paragraph [0047] of Ma referenced by the Examiner, does not disclose such a means. Rather, paragraph [0047] of Ma discloses a control panel of a terminal having a display device 16 on which images can be viewed by the operator or other medical professionals or in a location to view the fixed (Fig. 2) display device. Paragraph [0047] further calls for the images to be stored on an image storage device 117. There is no description or suggestion in paragraph [0047] of a means for selecting and addressing one or more medical professionals, nor a means for selecting

an electronic image to be sent to the selected medical professional(s). The Examiner does not assert that Sumanaweera or Gelvin cure this shortcoming of Ma.

Accordingly, it is submitted that claim 8, and claims 9 and 30 dependent therefrom distinguish patentably over the references of record.

Claim 22 calls for a plurality of radiologists to be moving around a hospital with portable units each carried by one of the radiologists. Claim 22 further calls for the remote unit to include a wireless communication unit which receives patient information images, etc. which is addressed to it from the workstation and to transmit instructions from the portable unit to the workstation. Ma does not disclose such a communication system, much less a communication system for communicating among a workstation and portable units carried by radiologists moving around the hospital, much less addressing communications to a selected radiologist. Rather, Ma sends the diagnostic images, and the like, to a central storage system 117. Sumanaweera and Gelvin do not cure this shortcoming of Ma. Sumanaweera is concerned with facilitating the interpretation of ultrasound images.

Accordingly, it is submitted that claim 22 distinguishes patentably and unobviously over the references of record.

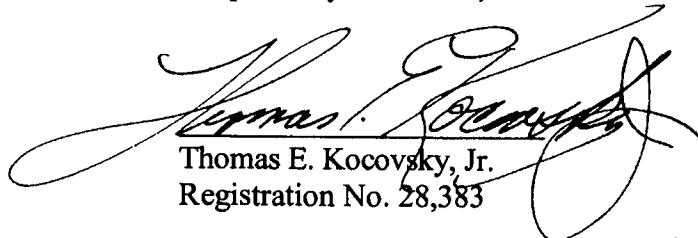
CONCLUSION

An early entry of this amendment and examination of all claims is requested.

For the reasons set forth above, it is submitted that claims 1-10, 15, and 22-30 distinguish patentably over the references of record. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, the Examiner is requested to telephone Thomas Kocovsky at 216.363.9000.

Respectfully submitted,



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